

K



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,869	12/31/2003	Robert Edward Gamble	24AT-135859	6292

7590 09/09/2005

Patrick W. Rasche  
Armstrong Teasdale LLP  
Suite 2600  
One Metropolitan Square  
St. Louis, MO 63102

EXAMINER
----------

PALABRICA, RICARDO J

ART UNIT	PAPER NUMBER
----------	--------------

3663

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/749,869

Applicant(s)

GAMBLE ET AL.

Examiner

Rick Palabrica

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 April 2005 and 23 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-19 and 24-28 is/are pending in the application.
- 4a) Of the above claim(s) 13-16, 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-12, 17-19 and 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/19/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Applicant's election with traverse of Group II and species A (Fig. 2) in the Amendment filed on 4/19/05, as further clarified in the 6/23/05 Response, is acknowledged. The Amendment cancels claims 1-4 and 20-23, and adds new claims 26-28. Applicant also states that claims 5-14, 17-19 and 24-25 read on the elected invention.

Applicant's cancellation of claim 1-4, and amendment of claims (e.g., claim 17), render moot the traverse of restriction among Groups I, II and III in the 3/22/05 Office action.

Applicant's traversal of the species election requirement is on the grounds that the species are not patentably distinct. This implies that the species identified by the examiner in the previous Office action do not possess mutually exclusive characteristics and are obvious variants of each other. If so, then applicant should clearly admit on record that this is the case in a response to this Office Action. Applicant also alleged that a search and examination of all claims would not place a serious burden on the examiner. This is not found persuasive because each species would require a separate search in view of their mutually exclusive characteristics, and these individual searches would not be co-extensive.

The requirement is still deemed proper and is therefore made FINAL.

2. Based on Applicant's election of species A (Fig. 2) and the clarification in the 6/23/05 Response that this species is directed to a "base grid wall positioned adjacent

Art Unit: 3663

said drywell sidewall," the limitations relating to the annular channel in claims 9, 13, 14, 17 do not apply.

Accordingly, only claims 5-8, 9(partly), 10-12, 17 (partly), 18, 19, 24, 25 and 26 read on the elected invention.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Claim 9 admits to having one flow baffle in the sump but neither one of the three figures shows this configuration. Therefore, the single flow baffle configuration must be shown or the feature(s) canceled from the claim(s).

Claim 24 recites a cone-shaped base grid but neither one of the three figures shows this configuration. Therefore, the cone-shaped base grid must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

Art Unit: 3663

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 5-12, 17-19, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Turricchia (U.S. 5,315,625) or Latter et al. (U.S. 4,442,065).

Turricchia discloses a nuclear reactor assembly (see Figs. 1-8). As to base claims 9 and 17, Applicant's claim language reads on Turricchia's invention as follows: a) containment vessel reads on primary container 11; b) "suppression pool" reads on steam suppression pool 17; c) "drywell" reads on drywell 14, including cavity 15 that is normally not flooded (see Fig. 3 and col. 4, lines 53+); d) "drywell sidewall extending from said floor" reads on the wall of cavity 15; e) "base grid" reads on any two horizontal

Art Unit: 3663

beams 26a that protect the integrity of container base 13, except for the lowest two sets of beams 26 (see Fig. 3, Fig. 7 and col. 4, lines 60+); f) "base grid shield wall" reads on the wall formed by any two horizontal grid beams 26a and an a beam 26b sandwiched there between, except for the lowest two sets of beams 26 (see Figs. 3 and 7); g) "flow baffle " reads on the lowest two sets of beams in Fig. 3; h) "top plate" and "bottom plate" read, respectively, on the top beam and bottom beam of Turricchia device for protecting container base 13.

As to claims 5-7, Applicant's claim language reads on Turricchia's invention as follows: a) "inlet passage" reads on connection pipe 30 (see Fig. 1 and col. 6, lines 13+); b) "outlet passage" reads on discharge pipe 21 (see Fig. 1 and col. 4, lines 46+),

As to claims 10 and 18, the transverse groove 28 in beam 26a and channel 27 in beam 26b inherently provide a substantially sinuous (i.e., serpentine) flow path in the sump (see Figs. 5-7).

As to claims 11 and 19, see Fig. 3, and note that one end of Turricchia's flow baffle (i.e., the lowest two sets of beams 26) has a larger cross sectional area than the other end. As applied to Fig. 3, Applicant's claim language "base end," reads on the left end of the flow baffle and "tip end," reads on the right end of the baffle.

As to claims 12 and 26, Turricchia's flow baffle inherently includes a flow inlet side and a flow outer side. Note that the claims are to an apparatus and not to a process. Thus, any pair of channels 27, for example, can be designated as inlet and outlet, with the first reading on "inlet" and the second reading on "outlet", or vice versa.

As to claim 25, Applicant's claim language "cone" is a generic term that includes a "truncated cone". Turricchia's flow baffle 27, which is in the shape of a truncated cone and coupled to the bottom beam, reads on Applicant's claim language. Note that the claim does not preclude a non-solid cone (i.e., the cone can be an aperture that is part of an element, as in the case for said flow baffle).

Latter et al. disclose a nuclear reactor assembly (see Figs. 1-3). As to base claims 9 and 17, Applicant's claim language reads on their invention as follows: a) containment vessel reads on containment 12; b) "suppression pool" reads on cooling tank 54 (see also col. 5, lines 25+); c) "drywell" reads on the cavity below pressure vessel 14, including the cavity within isolation tube or conduit 18; d) "drywell sidewall extending from said floor" reads on the wall of said cavity; e) "base grid" reads on inner section of core catcher heat exchanger 20; f) "base grid shield wall" reads on inner wall 36 (see Fig. 3 and col. 6, lines 45+); g) "flow baffle" reads on the combination of the discharge end of conduit 50 and manifold piping 94 (see Fig. 3); h) "top plate" and "bottom plate" read, respectively, on the top beam and bottom of cone-shaped branching parts 92 of core catcher heat exchanger (see Fig. 3); i) "sump" reads on the space between the containment structure 96 and inner section of core catcher heat exchanger 20. As to claims 10 and 18, the apparatus of Latter et al. provides a substantially sinuous (i.e., serpentine) flow path in the sump (see Fig. 3).

As to claims 5-7, Applicant's claim language reads on Latter et al.'s invention as follows: a) "inlet passage" reads on input conduit 50 and "outlet passage" reads on output conduit 52 (see Fig. 2 and col. 5, lines 21+),

As to claims 11 and 19, see Fig. 3, and note that the larger cross sectional area of conduit 50 (which reads on claim language "base end") than either one of manifolds 94 (which reads on claim language, "tip end"). While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of the claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

As to claims 12 and 26, Latter et al.'s flow baffle includes a flow inlet side, e.g., discharge at the end of conduit 50, and a flow outer side, i.e., manifold 94. Note that the claims are to an apparatus and not to a process. Thus, the manifold can also read on "outlet" and the discharge at the end of conduit 50 can also read on "inlet."

As to claims 24 and 25, see Fig. 3, which shows the base grid as conical, and a cone coupled to the bottom plate of said conical base grid, through its linear sides.

### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References C-G further illustrate prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 571-272-6880. The examiner can normally be reached on 6:30-5:00, Mon-Thurs.

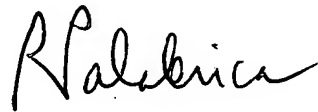
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RJP  
September 6, 2005

A handwritten signature in cursive script, appearing to read "R. J. Palabrica".